

REMARKS

Claims 1-14 are pending in this application. By this Amendment, claim 1 is amended. Support for the amendment to claim 1 can be found, for example, in the specification as filed at page 2, lines 8-18, page 9, line 24 to page 10, line 3, and Figure 1. No new matter is added.

The courtesies extended to Applicants' representative by Examiner Kwon and Supervisory Examiner Ryan at the interview held April 9, 2009, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicants' record of the interview.

I. Rejection Under 35 U.S.C. §§102(a) and (e)

The Office Action rejects claims 1-9 under 35 U.S.C. §§102(a) and (e) as allegedly being anticipated by U.S. Patent Application Publication No. 2004/0043277 ("Ito"). Applicants respectfully traverse this rejection.

A. Ito Is Not Available As Prior Art Under 35 U.S.C. §102(a)

The present Application has claimed priority to Japanese Patent Application No. 2003-427035, a certified translation of which is enclosed and fully supports claims 1-14. Japanese Patent Application No. 2003-427035 was filed December 24, 2003, before March 4, 2004, the earliest U.S. publication date of Ito (and before March 3, 2004, the earliest publication date of any Ito patent family member (i.e., EP 1,394,884)). Thus, Applicants respectfully submit that Ito does not qualify as prior art under 35 U.S.C. §102(a). Withdrawal of the rejection over Ito under 35 U.S.C. §102(a) is respectfully requested.

B. The Layers of Ito Are Not The Higher And Lower Temperature Zones And Areas, As Recited In Claim 1

With respect to the rejection under 35 U.S.C. §102(e), Ito does not describe a fuel cell having a hydrogen permeable metal layer that is formed on the electrolyte layer and includes a hydrogen permeable metal, wherein the hydrogen permeable metal layer further includes a

lower temperature area corresponding to the lower temperature zone and a higher temperature area corresponding to the higher temperature zone, and the lower temperature area and the higher temperature area have different settings of either or both of composition and layout of components, as recited in claim 1.

The Patent Office cites Ito, Figures 1 and 9, and alleges that it is well known that the fuel cell of Ito will exhibit a higher temperature closer to the hydrogen electrode and a lower temperature closer to the oxygen electrode. The Patent Office asserts that because of the alleged temperature difference between the hydrogen and oxygen electrodes of Ito, that Ito describes a fuel cell as recited in claim 1.

Applicants note that in a hydrogen ion conductive fuel cell, as in the present claims, the exothermic reaction takes place at the oxygen electrode, not the hydrogen electrode, as asserted by the Patent Office. Thus, in a hydrogen ion conductive fuel cell, heat generated by the exothermic reaction is at the oxygen electrode, not the hydrogen electrode. Therefore, the Patent Office theory regarding "common knowledge" is not correct regarding hydrogen ion conductive fuel cells, and consequently the reasoning for anticipation regarding zones and areas in Ito is not proper/correct.

Additionally, the Patent Office states that the terms "zone" and "area" as recited in claim 1 are considered to be interchangeable, and asserts that the fuel cell of Ito would allegedly have the higher and lower temperature zones and areas recited in claim 1. Specifically, the Patent Office asserts that layer 55 of Fig. 9 and layer 24 of Fig. 1 are the higher temperature area recited in claim 1, and layer 53 of Fig. 9 and layers 21 and 22 of Fig. 1 are the lower temperature area recited in claim 1, because the fuel cell of Ito would allegedly exhibit a higher temperature near the hydrogen electrode.

It is well established that the words of a claim must be given their "plain meaning", and that the claims must also be interpreted as broadly as their terms reasonably allow.

MPEP §2111.01. Particularly, this is applicable in interpreting the language of claim 1, because claim 1 specifically uses the terms "zone" and "area" as well as the term "layer". The only reasonable interpretation of the use of different terms in the same claim is that the different terms have different meanings (i.e., "zone" and "area" do not mean "layer", particularly because the high and low temperature areas are specifically recited as corresponding to the high and low temperature zones, and are further recited as incorporated in a single hydrogen permeable metal layer). Therefore, the words "zone" and "area" of claim 1 are not properly interpreted to mean "layer", as is alleged by the Patent Office. As such, the separate layers of Ito asserted by the Patent Office as allegedly being high and low temperature zones and areas cannot be the higher and lower temperature zones and areas of claim 1.

C. The Higher And Lower Temperature Zones And Areas Of Claim 1 Are Part Of A Single Hydrogen Permeable Metal Layer, And Ito Fails To Describe A Single Layer With Higher And Lower Temperature Areas

Figures 1 and 9 of Ito illustrate definitively that the layers cited by the Patent Office as allegedly being lower and higher temperature areas are, in fact, independent layers, not zones or areas as recited in claim 1. Because the higher and lower temperature zones and areas of claim 1 are recited as being part of a single hydrogen permeable metal layer, the independent layers of Ito cannot be higher and lower temperature zones and areas of claim 1.

The Patent Office assertion that layers 21, 22 and 24 of Ito, Fig. 1, and layers 53 and 55 of Ito, Fig. 9, are all a hydrogen permeable metal layer formed on the electrolyte layer, as required by claim 1, is not possible. The layers of Ito alleged to be the hydrogen permeable layer (i.e., Fig. 9, numbers 53 and 55) are separated from the electrolyte layer (i.e., Fig. 9, number 51) by a reaction suppression layer (i.e. Fig. 9, number 52).

Additionally, as recited by claim 1, and as evident from Figures 1 and 4-9 of the specification as filed, the single hydrogen permeable metal layer (item 22, in present Fig. 1)

of claim 1 is a single layer comprising both the higher and lower temperature areas. Because it is clear that the alleged higher and lower temperature areas the Patent Office cites as allegedly being disclosed by Ito are not part of the same layer, the fuel cell of Ito can not be the fuel cell of claim 1, because claim 1 specifically recites that the higher and lower temperature areas are part of the same hydrogen permeable metal layer.

For at least this additional reason, the rejection of claim 1 over Ito is not reasonable.

D. Ito Fails To Describe A Single Hydrogen Permeable Metal Layer Having Different Settings Of Either Or Both Of Composition And Layout Of Components, As Required In Claim 1

Moreover, Ito fails to provide any description of a single hydrogen permeable metal layer that is formed on the electrolyte layer including a lower temperature area corresponding to the lower temperature zone and a higher temperature area corresponding to the higher temperature zone, wherein the lower temperature area and the higher temperature area have different settings of either or both of composition and layout of components, as required by claim 1. The layers of Ito cited by the Patent Office as allegedly being the higher and lower temperature areas of claim 1 are, instead, uniform in construction through each entire layer. Thus, Ito fails to describe a layer having different settings of either or both of composition and layout of components, as recited in claim 1. Thus, for at least this additional reason, Ito fails to anticipate claim 1.

E. Conclusion

Therefore, Ito fails to anticipate claim 1-9. Withdrawal of the rejection is respectfully requested.

II. Rejections Under 35 U.S.C. §103(a)

The Office Action rejects claims 10-12 and 14 under 35 U.S.C. §103(a) as allegedly being obvious over Ito in view of U.S. Patent No. 6,649,293 ("Jones"). The Office Action rejects claim 13 under 35 U.S.C. §103(a) as allegedly being obvious over Ito in view of Jones

and U.S. Patent No. 5,993,984 ("Matsumura"). Applicants respectfully traverse these rejections.

As discussed above, Ito is not available as prior art under 35 U.S.C. §102(a). Ito is only available as prior art under 35 U.S.C. §102(e), because the present application claims priority to Japanese Patent Application No. 2003/427035, filed December 24, 2003, which is between the earliest filing date of Ito (August 18, 2003) and the earliest publication date of Ito (i.e., March 3, 2004, as EP 1,394,884). Furthermore, Ito and the present application were, at the time of the present invention, owned by the same entity (Toyota Jidosha Kabushiki Kaisha).

As such, Ito can not be relied on under 35 U.S.C. §103(a). See 35 U.S.C. §103(c).

A. Ito In View Of Jones

As discussed above, Ito cannot be relied on under 35 U.S.C. §103(a).

Jones describes a heatable end plate for compressing a fuel cell stack. See Jones, Abstract. However, Jones, alone, fails to render obvious independent claim 1, and thus also fails to render obvious dependent claims 10-12 and 14.

Withdrawal of the rejection is respectfully requested.

B. Ito In View Of Jones And Matsumura

As discussed above, Ito cannot be relied on under 35 U.S.C. §103(a).

Because Jones fails to render obvious independent claim 1, Jones also fails to render obvious dependent claim 13.

Matsumura describes a fuel cell power generating system comprising fuel cells laminated in connection. Matsumura, Abstract and column 12, lines 13-15. However, Matsumura fails to remedy the deficiencies of Jones.

Therefore, Jones and Matsumura fail to render obvious claim 13. Withdrawal of the rejection is respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-14 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Enclosure:

Certified Translation of Japanese Patent Application No. 2003-427035

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